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PATENT **MS136622.01 / MSFTP272US**

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Date: 09-26-05

Michael J. Motley

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Applicant(s): Eric J. Horvitz, *et al.*

Serial No: 09/364,522

Filing Date: July 30, 1999

Examiner: Rachna Singh

Art Unit: 2176

Title: METHODS FOR DISPLAY, NOTIFICATION, AND INTERACTION WITH PRIORITIZED MESSAGES

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

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APPEAL BRIEF

Dear Sir:

Appellants' representative submits this brief in connection with an appeal of the above-identified patent application. A credit card payment form is filed concurrently herewith in connection with all fees due regarding this appeal brief. In the event any additional fees may be due and/or are not covered by the credit card, the Commissioner is authorized to charge such fees to Deposit Account No. 50-1063 [MSFTP272US].

I. Real Party in Interest (37 C.F.R. §41.37(c)(1)(i))

The real party in interest in the present appeal is Microsoft Corporation, the assignee of the present application.

II. Related Appeals and Interferences (37 C.F.R. §41.37(c)(1)(ii))

Appellants, appellants' legal representative, and/or the assignee of the present application are not aware of any appeals or interferences which may be related to, will directly affect, or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims (37 C.F.R. §41.37(c)(1)(iii))

Claims 1-43 stand rejected by the Examiner. The rejection of claims 1-43 is being appealed.

IV. Status of Amendments (37 C.F.R. §41.37(c)(1)(iv))

Appellants' legal representative submitted amendments in a Reply to the Final Office Action dated May 25, 2005 to correct minor informalities. These amendments have been entered.

V. Summary of Claimed Subject Matter (37 C.F.R. §41.37(c)(1)(v))

A. Independent Claim 1

Independent claim 1 recites a methodology comprising: receiving a document; generating a priority of the document based on a trained document classifier; determining whether a user is busy; and alerting the user to the document based on a predetermined criteria. (*See e.g.*, pg. 2, line 19 – pg. 3, line 12; pg. 19, line. 15 – pg. 20, line 19; pg. 21, line 14 – pg. 22, line 8; pg. 23, ll. 2-21; pg. 24, line 17 – pg. 25, line 15; *See generally* Figs. 6-11).

B. Independent Claim 13

Independent claim 13 recites a methodology comprising: training a document classifier comprising a Bayesian classifier and a support vector machine classifier; receiving a document comprising an e-mail; generating a priority of the document based on the document classifier; determining whether a user is busy; and alerting the user to the document based on a predetermined criteria. (*See e.g.*, pg. 2, line 19 – pg. 3, line 12; pg. 19, line. 15 – pg. 20, line 19; pg. 21, line 14 – pg. 22, line 8; pg. 23, ll. 2-21; pg. 24, line 17 – pg. 25, line 15; *See generally* Figs. 6-11).

C. Independent Claim 19

Independent claim 19 recites a machine-readable medium having instructions stored thereon for execution by a processor to perform a method comprising: receiving a document; generating a priority of the document based on a trained document classifier; determining whether a user is busy; and alerting the user to the document based on a predetermined criteria. (*See e.g.*, pg. 2, line 19 – pg. 3, line 12; pg. 19, line. 15 – pg. 20, line 19; pg. 21, line 14 – pg. 22, line 8; pg. 23, ll. 2-21; pg. 24, line 17 – pg. 25, line 15; *See generally* Figs. 6-11).

D. Independent Claim 26

Independent claim 26 recites a computerized system, comprising: a program to generate a document; a trained document classifier to generate a priority of the document; a component to determine whether a user is busy; and an alerting mechanism to alert the user of the document based on a predetermined criteria. (*See e.g.*, pg. 2, line 19 – pg. 3, line 12; pg. 19, line. 15 – pg. 20, line 19; pg. 21, line 14 – pg. 22, line 8; pg. 23, ll. 2-21; pg. 25, line 16 – pg. 26, line 19; *See generally* Figs. 6-10 and 12-13).

VI. Grounds of Rejection to be Reviewed (37 C.F.R. §41.37(c)(1)(vi))

A. Claims 1-3, 8-12, 19-28, 32-34, 37, and 41-43 stand rejected as being unpatentable under 35 U.S.C. §103(a) over Forscher ("CyberNag (Mailmen Division) Project Notebook,"

http://www.cc.gatech.edu/computing/classes/cs3302_96_winter/projects/groups/MailMen , 1996) in view of Cohen ("Learning Rules that Classify E-Mail," http://www-2.cs.cmu.edu/~wcohen/pubs-t.html, 1996) and Lewis ("Evaluating and Optimizing Autonomous Text Classification Systems," ACM, 1995).

B. Claims 4-7, 29, and 38-40 stand rejected as being unpatentable under 35 U.S.C. §103(a) over Forscher in view of Cohen and Lewis, and further in view of Henderson *et al.* (US 6,185,603 B1).

C. Claims 30-31 stand rejected as being unpatentable under 35 U.S.C. §103(a) over Forscher in view of Cohen and Lewis, and further in view of Doi (US 5,077,668).

D. Claims 13-14, 16, and 35-36 stand rejected as being unpatentable under 35 U.S.C. §103(a) over Forscher and Lewis, and further in view of Platt (US 6,327,581 B1).

E. Claims 15, 17, and 18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Forscher in view of Cohen, Lewis, and Platt.

VII. Argument (37 C.F.R. §41.37(c)(1)(vii))

A. Rejection of Claims 1-3, 8-12, 19-28, 32-34, 37, and 41-43 Under 35 U.S.C. §103(a)

Claims 1-3, 8-12, 19-28, 32-34, 37, and 41-43 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Forscher ("CyberNag (Mailmen Division) Project Notebook," http://www.cc.gatech.edu/computing/classes/cs3302_96_winter/projects/groups/MailMen , 1996) in view of Cohen ("Learning Rules that Classify E-Mail," http://www-2.cs.cmu.edu/~wcohen/pubs-t.html, 1996) and Lewis ("Evaluating and Optimizing Autonomous Text Classification Systems," ACM, 1995). It is requested that this rejection be reversed for at least the following reason. Forscher, Cohen, and Lewis, alone or in combination, do not teach or suggest all aspects of the subject claims.

> To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) ***must teach or suggest all the claim limitations.*** *See* MPEP §706.02(j). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *See In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Appellants' claimed invention relates to prioritized document display, notification, and interaction. (*See* pg. 2, line 19). In particular, independent claim 1 (and similar independent claims 19 and 26) recites ***determining whether a user is busy.*** Appellants' invention describes determining whether a user is busy in ways such as the rate at which a user is working on a computer, whether the user is on the telephone, speaking with someone, or at a meeting (*See* pg. 22, ll. 1-5), and noting whether the user checked a box indicating he or she is busy. (*See* pg. 30, ll. 6-10). Forscher, Cohen, and Lewis, alone or in combination, do not teach or suggest such aspect of the invention as claimed.

Forscher describes an e-mail parsing module and Cohen describes e-mail classification rules. The Examiner concedes that Forscher and Cohen do not disclose ***determining whether a user is busy.*** (*See* Final Office Action Dated May 25, 2005, pg. 4). In order to cure this deficiency, the Examiner offers Lewis. Lewis discloses measuring, estimating, and optimizing the effectiveness of decisions for text retrieval systems, focusing on one that determines whether or not a document belongs to a single class. (*See* pg. 246, col. 2). The Examiner contends that Lewis discloses determining whether a user is busy at pg. 246, col. 2. The Examiner further contends that Lewis's expected loss of non-review takes into account whether or not the user is busy. In addition, the Examiner contends that by recognizing the decision of which items are important enough to be "grounds for disturbing the user," Lewis is considering whether

the user is busy because there would be no need to determine the loss of non-review if the user has already viewed the document. (*See* Final Office Action Dated May 25, 2005, pg. 4). Appellants' representative respectfully disagrees with such contention.

At the indicated passage, Lewis describes a system and method that decides which items are relevant enough to warrant disturbing the user. (*See* pg. 246, col. 2). Lewis computes a score that indicates how good past and test decisions were, estimates the effectiveness of future decisions, and tunes the system based on expected effectiveness. (*See* pg. 247, col. 1-2). To determine whether the information constitutes "highly relevant material" (*See* pg. 246, col. 2), Lewis considers the ***content of the material*** and ***empirical decisions*** to decide if the user should be disturbed, assuming that users only want to be notified of important information. (*See* pg. 246, col. 2). Disturbing the user only with important information does not teach or suggest determining whether a user is busy. Lewis does not evaluate any factors of the user's present environment, let alone ***determine whether a user is busy.*** Thus, Lewis fails to teach or suggest such aspect as claimed.

Furthermore, claim 32 recites an ***interaction context*** that is active for a period of time following an alert that the document priority has exceeded a threshold and claim 33 recites the user is able to ***make a gesture while the interaction context is active*** to view the document. While the interaction context is temporarily active, gestures such as wiggling the mouse quickly from side to side can allow a user to view the document. (*See* pg. 28, ll. 5-15). Forscher, Cohen, and Lewis, alone or in combination, do not teach or suggest such claimed aspects.

The Examiner concedes that Forscher and Cohen do not teach these aspects, but contends that Lewis discloses such aspect at pages 246-249. (*See* Final Office Action Dated May 25, 2005, pg. 7-8). Appellants' representative respectfully disagrees with this contention. Although Lewis describes "alerting" and "disturbing" a user (*See* pg. 246, col. 2), the cited reference is silent with respect to an ***interaction context*** that is active for a period of time following an alert, as stated in claim 32, allowing a user to ***make a gesture while the interaction context is active*** to view the document, as recited in claim 33. Lewis fails to describe how such "alerting" and "disturbing" of the user proceeds and instead focuses on how the decision of whether to alert or disturb the user is made.

In view of at least the foregoing, it is readily apparent that Forscher, Cohen, and Lewis, alone or in combination, do not teach or suggest the invention as recited in independent claims 1, 19, and 26 (and associated dependent claims 2-3, 8-12, 20-25, 27-28, 32-34, 37, and 41-43). Accordingly, this rejection should be reversed.

B. Rejection of Claims 4-7, 29, and 38-40 Under 35 U.S.C. §103(a)

Claims 4-7, 29, and 38-40 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Forscher in view of Cohen and Lewis, and further in view of Henderson *et al.* (US 6,185,603 B1). Reversal of this rejection is requested for at least the following reasons. Claims 4-7 are dependent on independent claim 1 and claims 29 and 38-40 are dependent upon independent claim 26. Henderson *et al.* teaches providing a plurality of codes for controlling certain features of an alerting message and a predefined escape sequence for use by the sender that is recognizable by a dedicated server that enables these codes. (*See* col. 2, ll. 15-18). Henderson *et al.* fails to teach or suggest determining whether a user is busy and therefore does not cure the aforementioned deficiencies of Forscher, Cohen, and Lewis with respect to independent claims 1 and 26. Thus, this rejection should be reversed.

C. Rejection of Claims 30-31 Under 35 U.S.C. §103(a)

Claims 30-31 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Forscher in view of Cohen and Lewis, and further in view of Doi (US 5,077,668). Reversal of this rejection is requested for at least the following reason. Claims 30-31 depend from independent claim 26, which is believed to be in condition for allowance. Doi teaches producing an abstract of a document from given document data. (*See* col. 1, ll. 9-10). However, Doi fails to teach or suggest determining whether a user is busy and thus fails to cure the above noted deficiencies of Forscher, Cohen, and Lewis with respect to independent claim 26. Therefore, this rejection should be reversed.

D. **Rejection of Claims 13-14, 16, and 35-36 Under 35 U.S.C. §103(a)**

Claims 13-14, 16, and 35-36 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Forscher in view of Cohen, Lewis, and Platt (US 6,327,581 B1). Reversal of this rejection is requested for at least the following reason. Independent claim 13 recites ***determining whether a user is busy.*** Forscher, Cohen, Lewis, and Platt, alone or in combination, do not teach or suggest such aspect.

Forscher describes an e-mail parsing module, Cohen describes e-mail classification rules, and Platt describes using support vector machines to classify objects. The Examiner concedes that Forscher, Cohen, and Platt do not disclose ***determining whether a user is busy.*** (*See* pg. 14). In order to cure this deficiency, the Examiner offers Lewis. As discussed above, Lewis does not determine whether a user is busy and thus fails to teach or suggest such claimed aspect.

In view of at least the foregoing, it is readily apparent that Forscher, Cohen, Lewis, and Platt, alone or in combination, do not teach or suggest the invention as recited in independent claim 13 (and associated dependent claims 14 and 16). Claims 35-36 are dependent on independent claim 26 and as explained above, Forscher, Cohen, Platt, and Lewis, alone or in combination, do not teach or suggest the novel aspect of determining whether a user is busy. Accordingly, this rejection should be reversed.

E. **Rejection of Claims 15, 17, and 18 Under 35 U.S.C. §103(a)**

Claims 15, 17, and 18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Forscher in view of Cohen, Lewis, and Platt. Reversal of this rejection is requested for at least the following reason. As noted above, Forscher, Cohen, Lewis, and Platt, alone or in combination, do not teach or suggest the invention as recited in independent claim 13 on which claims 15, 17, and 18 depend. Therefore, this rejection should be reversed.

F. Conclusion

For at least the above reasons, the claims currently under consideration are believed to be patentable over the cited references. Accordingly, it is respectfully requested that the rejections of claims 1-43 be reversed.

If any additional fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP272US].

Respectfully submitted,
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VIII. Claims Appendix (37 C.F.R. §41.37(c)(1)(viii))

1. A computer-implemented method comprising:
receiving a document;
generating a priority of the document based on a trained document classifier;
determining whether a user is busy; and
alerting the user to the document based on a predetermined criteria.

2. The method of claim 1, wherein receiving a document comprises receiving an e-mail.

3. The method of claim 1, wherein alerting the user comprises playing a sound based on the predetermined criteria.

4. The method of claim 1, wherein alerting the user comprises opening the document based on the predetermined criteria.

5. The method of claim 4, wherein opening the document based on the predetermined criteria comprises sizing the document based on the priority of the document.

6. The method of claim 4, wherein opening the document based on the predetermined criteria comprises centrally locating the document based on the priority of the document.

7. The method of claim 1, wherein alerting the user comprises giving the document focus based on the predetermined criteria.

8. The method of claim 1, wherein alerting the user comprises opening an agent based on the predetermined criteria.

9. The method of claim 1, wherein alerting the user comprises alerting the user based on the priority being within a predetermined range.

10. The method of claim 1, wherein alerting the user comprises:

determining whether the priority of the document is greater than a predetermined threshold; and

upon determining that the user is busy, alerting the user only upon determining that the priority of the document is greater than the predetermined threshold.

11. The method of claim 1, wherein alerting the user comprises displaying a plurality of documents including the document in order according to a priority of each document.

12. The method of claim 11, wherein displaying the plurality of documents comprises displaying only documents having a priority greater than a predetermined threshold.

13. A computer-implemented method comprising:

training a document classifier comprising of a Bayesian classifier and a support vector machine classifier;

receiving a document comprising an e-mail;

generating a priority of the document based on the document classifier;

determining whether a user is busy; and

alerting the user to the document based on a predetermined criteria.

14. The method of claim 13, wherein alerting the user comprises at least one of playing a sound and opening the document based on the predetermined criteria.

15. The method of claim 13, wherein alerting the user comprises opening an agent based on the predetermined criteria.

16. The method of claim 13, wherein alerting the user comprises alerting the user based on the priority being within a predetermined priority range.

17. The method of claim 13, wherein alerting the user, comprises:

determining whether the priority of the document is greater than a predetermined threshold; and,

upon determining that the user if busy, alerting the user only upon determining that the priority of the document is greater than the predetermined threshold.

18. The method of claim 13, wherein alerting the user comprises displaying a plurality of documents including the document in order according to a priority of each document.

19. A machine-readable medium having instructions stored thereon for execution by a processor to perform a method comprising:

receiving a document;

generating a priority of the document based on a trained document classifier;

determining whether a user is busy; and

alerting the user to the document based on a predetermined criteria.

20. The medium of claim 19, wherein receiving a document comprises receiving an e-mail.

21. The medium of claim 19, wherein alerting the user comprises at least one of playing a sound and opening the document based on the predetermined criteria.

22. The medium of claim 19, wherein alerting the user comprises opening an agent based on the predetermined criteria.

23. The medium of claim 19, wherein alerting the user comprises alerting the user based on the priority being within a predetermined priority range.

24. The medium of claim 19, wherein alerting the user comprises:

determining whether the priority of the document is greater than a predetermined threshold; and

upon determining that the user if busy, alerting the user only upon determining that the priority of the document is greater than the predetermined threshold.

25. The medium of claim 19, wherein alerting the user comprises displaying a plurality of documents including the document in order according to a priority of each document.

26. A computerized system, comprising:

a program to generate a document;

a trained document classifier to generate a priority of the document;

a component to determine whether a user is busy; and

an alerting mechanism to alert the user of the document based on a predetermined criteria.

27. The system of claim 26, further comprising a viewer to filter documents including the document by the priority thereof.

28. The system of claim 26, wherein the alerting mechanism employs at least one scalar parameter to define the manner by which an alerting sound is rendered, based on the priority of the document.

29. The system of claim 26, wherein the user is able to define thresholds among different ranges of uncertainty, and specify multiple options involving the automation of sizing and centering of documents including the document within each range.

30. The system of claim 26, further comprising a brief to provide the user a summary of documents including the documents, that have arrived while the user was one of away or busy within another application.

31. The system of claim 30, wherein the summary of the document has a summarization level, such that the summarization level decreases as a function of the priority of the document.

32. The system of claim 26, further comprising an interaction context that is active for a period of time following an alert that the document priority has exceeded a threshold.

33. The system of claim 32, wherein the user is able to make a gesture while the interaction context is active to view the document.

34. The system of claim 26, wherein the program comprises an electronic mail program to receive an electronic mail as the document.

35. The system of claim 26, wherein the document classifier comprises a Bayesian document classifier.

36. The system of claim 26, wherein the document classifier comprises a support vector-machine classifier.

37. The system of claim 26, wherein the alerting mechanism comprises a sound-playing mechanism.

38. The system of claim 26, wherein the alerting mechanism comprises a document displaying mechanism.

39. The system of claim 38, wherein the document-displaying mechanism is to display the document centrally based on the priority of the document.

40. The system of claim 38, wherein the document-displaying mechanism is to size the document based on the priority of the document.

41. The system of claim 26, wherein the predetermined criteria comprises a determination of whether the priority of the document is within the predetermined range.

42. The system of claim 26, wherein the predetermined criteria comprises a determination of whether the user is busy.

43. The system of claim 26, wherein at least one of the alerting mechanism, the program and the document classifier comprise a computer program executed by a processor from a computer-readable medium.

IX. Evidence Appendix (37 C.F.R. §41.37(c)(1)(ix))

None.

X. Related Proceedings Appendix (37 C.F.R. §41.37(c)(1)(x))

None.